

CLAIMS

1. <sup>having,</sup>  
~~characterized in that it~~  
<sup>at least at</sup>  
~~has,~~ after being calcined at 800°C for 8 hours, a  
 5 specific surface area of at least 85 m<sup>2</sup>/g.

2. Zinc aluminate according to claim 1,  
<sup>having,</sup>  
~~characterized in that it has,~~ after being calcined at  
 800°C for 8 hours, a specific surface area of at least  
 100 m<sup>2</sup>/g.

3. <sup>claim 1</sup>  
<sup>having,</sup>  
~~characterized in that it has,~~ after  
 10 being calcined at 900°C for 2 hours, a specific surface  
~~area of at least 70 m<sup>2</sup>/g, more particularly at least~~  
~~80 m<sup>2</sup>/g.~~

4. <sup>claim 1</sup>  
<sup>having,</sup>  
~~characterized in that it has,~~ after  
 15 being calcined at 1000°C for 6 hours, a specific surface  
~~area of at least 50 m<sup>2</sup>/g, more particularly at least~~  
~~70 m<sup>2</sup>/g.~~

5. <sup>claim 1</sup>  
<sup>having</sup>  
~~characterized in that it has,~~ after  
 20 being calcined at 1000°C for 6 hours, in an H<sub>2</sub>O/N<sub>2</sub> medium  
 with 10% H<sub>2</sub>O by volume, a specific surface area of at  
 least 50 m<sup>2</sup>/g.

6. ~~Zinc aluminate according to one of the~~  
~~preceding claims, characterized in that it comprises at~~  
~~least one additive chosen from the elements of Groups IA,~~  
~~IIA, VIIA to IB of the Periodic Table and from tin,~~

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gallium and the rare earths.

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7. Precursor composition for a zinc aluminate, characterized in that it comprises compounds of zinc and of aluminium and in that it is capable of forming, after being calcined, a zinc aluminate, this aluminate having, after being calcined at 800°C for 8 hours, a specific surface area of at least 85 m<sup>2</sup>/g.

8. Composition according to claim 7, <sup>which</sup> ~~characterized in that it is capable of forming an~~ aluminate having, after being calcined at 800°C for 8 hours, a specific surface area of at least 90 m<sup>2</sup>/g. ~~more particularly at least 100 m<sup>2</sup>/g.~~

9. Composition according to claim 7 ~~or 8~~, <sup>comprising</sup> ~~characterized in that it furthermore comprises at least~~ one compound of an element <sup>selected from the group consisting of</sup> ~~chosen from those of~~ Groups IA, IIA, VIIA to IB of the Periodic Table and from tin, gallium and the rare earths.

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10. Process for the preparation of an aluminate according to one of claims 1 to 6, or of a precursor composition according to one of claims 7 to 9, characterized in that it comprises the following steps:

- a zinc salt, sol or alkoxide and an aluminium alkoxide are brought together in a solvent medium, optionally with a salt, sol or alkoxide of at least one
- 25 aforementioned additive;
- the mixture thus formed is hydrolysed by adding water in an excess amount with respect to the aluminium alkoxide;

the precipitate formed is recovered and optionally dried, thereby obtaining the precursor composition;

- if required, the said precipitate is calcined, thereby obtaining the aluminate.

11. Process for the preparation of an aluminate comprising an additive according to claim 6 or of a precursor composition comprising a compound of an element according to claim 9, characterized in that it comprises the following steps:

- a zinc salt, sol or alkoxide and an aluminium alkoxide are brought together in a solvent medium;

- the mixture thus formed is hydrolysed by adding water in an excess amount with respect to the aluminium alkoxide;

- the precipitate formed is recovered and optionally dried, thereby obtaining the precursor composition;

- if required, the said precipitate is calcined, thereby obtaining the aluminate;

- the precursor composition or the aluminate is impregnated with a solution of a salt of the additive or of the aforementioned element.

12. Process according to claim 10 ~~or 11~~,  
 25 ~~characterized in that~~ <sup>wherein</sup> an alcoholic solvent is used as solvent medium.

13. Process according to claim 10, <sup>wherein</sup> ~~or 12~~,  
~~characterized in that~~ water in the form of a

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water-alcohol mixture is added.

14. Process according to ~~one of claims 10 to 13~~ <sup>Claim 10</sup> ~~characterized in that~~ <sup>wherein</sup> the zinc salt and the aluminium alkoxide are brought together by adding the zinc salt in the solvent medium to the aluminium alkoxide.

15. Process according to ~~one of claims 10 to 14~~ <sup>Claim 10</sup> ~~characterized in that~~ <sup>wherein</sup> the precipitate is calcined at a temperature of at least 500°C.

16. Process for the treatment of gases for ~~the~~ <sup>comprising using</sup> purpose of reducing the emissions of nitrogen oxides, ~~characterized in that~~ a catalytic system comprising an aluminate according to ~~one of claims 1 to 6~~ <sup>claim 1</sup> is used.

17. Process for the treatment of exhaust gases of motor vehicles, ~~characterized in that~~ <sup>comprising using</sup> a catalytic system comprising an aluminate according to ~~one of claims 1 to 6~~ is used.

18. Process for the treatment of gases from motor vehicles, characterized in that a catalytic system comprising an aluminate according to one of claims 1 to 6 is used, the gases having a high oxygen content.

19. Catalytic system for the implementation of a process according to claims 16, 17 or 18, characterized in that it comprises an aluminate according to one of claims 1 to 6 on a substrate.

20. Use of an aluminate according to one of claims 1 to 6 or of a precursor composition according to one of claims 7 to 9 for the manufacture of a catalytic system according to claim 19.

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